

REMARKS

Claims 1-30 are pending in this application. Claims 1-22 are allowed, and claims 23-30 are rejected. Claims 23-24, 26-27, and 30 have been amended, claims 25, 28, and 29 have been canceled without prejudice, and new claim 31 has been added. Support for the amendment can be found in the entire specification. No new matter has been added by the amendments. Reconsideration and allowance of the claims are respectfully requested in view of the above amendments and following remarks.

Claim Rejections Under 35 U.S.C. §103

Claims 23-30 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Kim et al., 2002/0071086 (hereinafter "Kim") in view of Yamate, 20020080318 ("Yamate"), Horii et al., JP 2000276073 (hereinafter "Horii"), and Asakura et al., US 6,806,938 (hereinafter "Asakura") for the reasons stated on pages 2-6 of the Office Action. Since claims 25, 28, and 29 have been canceled without prejudice, the rejection of the claims 25, 28, and 29 is moot. Applicants respectfully traverse the rejection.

For an obviousness rejection to be proper, the Examiner must meet the burden of establishing that all elements of the invention are disclosed in the prior art; and that the prior art relied upon, coupled with knowledge generally available in the art at the time of the invention, must contain some suggestion or incentive that would have motivated the skilled artisan to modify a reference or combined references. *In re Fine*, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988); *In Re Wilson*, 165 U.S.P.Q. 494, 496 (C.C.P.A. 1970). Any of the cited references, however, does not teach or suggest all elements of claim 23.

Claim 23 recites a method of manufacturing a liquid crystal display device, the method comprising: forming a first substrate including a display region and a peripheral region adjacent to the display region, the display region having a plurality of data lines, a plurality of scan lines, and a plurality of pixels, each of the pixels having a switching device electrically coupled to one of the scan lines and one of the data lines, wherein forming a first substrate comprises: forming a first metal layer in the display region and the peripheral region; patterning the first metal layer to form the scan lines and gate electrodes branched from the scan lines on the display region and to form a plurality of first connecting lines in the peripheral region so that the first connection lines are

electrically and directly coupled to a first group of the scan lines; forming an insulation layer, an active layer and a contact layer on the first substrate on which the scan lines, the gate electrodes, and the first connecting lines are formed; patterning the active layer and the contact layer to form an active pattern and a contact pattern; forming a second metal layer on the first substrate on which the insulation layer, the active pattern, and the contact pattern are formed; and patterning the second metal layer to form the data lines, source electrodes branched from the data lines, and drain electrodes spaced apart from the source electrode on the display region, and to form a plurality of second connecting lines in the peripheral region so that the second connecting lines are electrically and directly coupled to a second group of the scan lines; combining the first substrate with a second substrate; and interposing a liquid crystal between the first and second substrates.

The first and second connection lines as recited in claim 23 are electrically and directly connected to the first and second groups of the scan lines. On the contrary, the paragraph 49 of Kim teaches that an end part 100a of each even numbered data lines D2, D4, ..., Dn is electrically connected to the corresponding conductive pattern 61 by the second transparent conductive film 51b. Therefore, the end part 100a of the even numbered data lines as disclosed in Kim is not directly connected to the conductive pattern 61. Thus, Kim fails to teach or suggest the element "patterning the first metal layer to form the scan lines and gate electrodes branched from the scan lines on the display region and to form a plurality of first connecting lines in the peripheral region so that the first connection lines are electrically and directly coupled to a first group of the scan lines; and patterning the second metal layer to form the data lines, source electrodes branched from the data lines, and drain electrodes spaced apart from the source electrode on the display region, and to form a plurality of second connecting lines in the peripheral region so that the second connecting lines are electrically and directly coupled to a second group of the scan lines", as recited in claim 23. Any of Horii, Yamate, and Asakura does not cure the deficiency of Kim. Therefore, the combination of Kim, Horii, Yamate, and Asakura does not render claim 23 obvious, because the combination fails to teach or suggest all elements of claim 23. Claims 24, 26, and 27 depend from claim 23, thus are believed to be allowable due to their dependency on claim 23.

Claim 30 recites a substrate for a display device, the substrate comprising: a first substrate including a display region and a peripheral region adjacent to the display region, the display region having a plurality of pixels, a plurality of data lines, and a plurality of scan lines disposed on a different layer from the data lines; a driver section including a scan driver circuit and a data driver circuit, the scan driver circuit and the data driver circuit formed in the peripheral region, the scan driver circuit providing the scan lines with a scan driving signal, and the data driver circuit providing the data lines with a data signal; and a connecting part formed in a portion of the peripheral region adjacent to first ends of the scan lines to be coupled to the first ends of the scan lines, the connecting part including a first group having a plurality of first connecting lines formed from a same layer as the scan lines and a second group having a plurality of second connecting lines formed from a same layer as the data lines, the scan driving signal being applied to the connecting part.

As indicated by the Examiner on page 3 of the office action, Kim only shows the method with the data lines, not the scan lines. Therefore, Kim fails to teach or suggest the element "the connecting part including a first group having a plurality of first connecting lines formed from a same layer as the scan lines and a second group having a plurality of second connecting lines from a same layer as the data lines", as recited in claim 30. The other references, that is, Horii, Yamate, and Asakura are silent in the teaching "the connecting part including a first group having a plurality of first connecting lines formed from a same layer as the scan lines and a second group having a plurality of second connecting lines from a same layer as the data lines", as recited in claim 30. Therefore, the combination of Kim, Horii, Yamate, and Asakura does not render claim 30 obvious, because the combination fails to teach or suggest all elements of claim 30.

Since it contains similar features, claim 31 is believed to be patentable over the combination of Kim, Horii, Yamate, and Asakura for at least the reasons given for claim 23 or 30.

Conclusion

In view of the foregoing, it is respectfully submitted that the instant application is in condition for allowance. Accordingly, it is respectfully requested that this application be allowed and a Notice of Allowance issued. If the Examiner believes that a telephone conference with Applicants' attorneys would be advantageous to the disposition of this case, the Examiner is cordially requested to telephone the undersigned.

In the event the Commissioner of Patents and Trademarks deems additional fees to be due in connection with this application, Applicants' attorney hereby authorizes that such fee be charged to Deposit Account No. 06-1130.

Respectfully submitted,

CANTOR COLBURN LLP

By:


Sonja BAE

Registration No. (See Attached)
Confirmation No. 5938
Cantor Colburn LLP
55 Griffin Road South
Bloomfield, CT 06002
PTO Customer No. 23413
Telephone: (860) 286-2929
Facsimile: (860) 286-0115

Date: June 9, 2005